

Testimony of June O'Neill on The Federal Equitable Pay  
Practices Act of 1985

Before the Subcommittee on Compensation and Employee  
Benefits, Committee on Post Office and Civil Services  
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Madam Chair and members of the committee, my name is June O'Neill. I am an economist and the Director of the Program of Policy Research on Women and Families at The Urban Institute in Washington, D.C. I am also a consultant for The U.S. Commission on Civil Rights. The views that I am expressing today, however, are my own and are not necessarily the views of The Urban Institute or its sponsors or of the Commission on Civil Rights.

It is an unassailable fact that in the federal workforce women and men tend to be employed in different occupations, that women are disproportionately concentrated in the lower grade levels and that the average pay of women is considerably below that of men. I believe that it would clearly be worthwhile to investigate the reasons for these differentials. However, while I share the broad goal of the Federal Equitable Pay Practices Act of 1985, to conduct studies that aim to shed light on the observed sex differentials, I do not believe that the particular study mandated by the bill would be a constructive step toward addressing this goal.

My objections are threefold. First, the bill sets up the expectation that the discriminatory component of the wage gap can be measured with precision. In fact, however, such a measurement can not be made with the existing tools of social scientists. It would be a complete misuse of economic or job content analysis to identify discrimination with the portion of the wage gap that can not be explained by the crude measure of skill and job characteristics that are currently available to analysts.

Second, job content analysis, which is one of the two mandated methodologies for studying sources of the wage gap, should not be used for that purpose. Job evaluation may be useful to management for some purposes. But it is inherently subjective and is therefore likely to provide particularly misleading results.

Third, the legislation sets up a partisan commission to direct the study, thereby politicizing what should be an objective, technical investigation.

In the testimony that follows I elaborate these points and present suggestions for other studies that I believe would provide useful information about the sources of pay and employment differentials in the federal government and for formulating policies to address them.

### SOURCES OF THE WAGE GAP

The wage gap - measured as the ratio of women's to men's hourly earnings--is currently about 72 percent in the United States. This ratio is close to 90 percent comparing 20-34 year olds and 80 percent at ages 25-34 years. However, when those aged 35 and older are compared, the ratio is not much higher than 65 percent. All of these ratios are higher than they were in the 1970's; so there has been an impressive narrowing of the wage gap in the past few years.

### Theories

What accounts for the pay gap? Labor market discrimination could play a role, but non-discriminatory factors have been shown to be important. Non-discriminatory factors would be those related to differences in worker productivity or to differences in job characteristics.

Worker productivity is exceedingly difficult to measure directly. A large volume of economic research has, however, identified many of the characteristics associated with higher wages, and, presumably, higher productivity. Many of these characteristics involve investments in "human capital" which improve the worker's skills and market value. These investments include formal schooling and training as well as the training and learning acquired on-the-job. Other investments include the time spent searching for a job with higher pay and migration to a different geographic region, if that is where better opportunities are found.

Human capital theory provides an explanation why women may have lower earnings than men and pursue different occupations than men even in the absence of any labor market discrimination. The theory stresses that individuals make schooling, training and other investment decisions on the basis of their perceptions of the costs of the available options and of the expected benefits associated with each. Women may evaluate these options differently than men because they anticipate spending less time over the years working at a job outside the home. Although the average woman of today is much more likely to work in the market after marriage than was the case in the past, it is still atypical for a woman to work continuously from the time of leaving school, without taking breaks to care for children or their homes. Data from the National Longitudinal Survey show that working women in their forties have worked only about 60 percent of the possible years they could have worked since leaving school. Moreover, many women have worked part-time or part-year during some of the years counted as work years. Data on job tenure from the Current Population Survey for 1981 show that at ages 45-54 working women have accumulated only 53 percent as many years of work with their current employer as working men.

Schooling and training are typically undertaken at younger ages. Many women, however, have underestimated the extent to which they will be working over their lifetimes and this factor

may well have influenced early occupational decisions. According to the National Longitudinal Survey, among women who were in their early twenties in 1968, only one-third said that they expected to be working when they reached their thirties. Yet, when followed up by the survey ten years later, more than 60 percent of these same women were actually found to be working.

If market work is expected to be secondary to home responsibilities, and of uncertain duration, an occupation requiring many years of investment in schooling and training is less likely to be chosen. Training with carry-over to the home would be more likely to be chosen, while training to learn a skill which depreciates or may become obsolete during periods of labor force withdrawal would be less likely to be chosen. The subjects that women have traditionally chosen in high school and college reflect these factors. Subjects such as education, nursing and home economics enhance productivity in the home as well as in the market. Subjects such as the sciences, engineering or business are more narrowly applicable to the market and provide skills that depreciate rapidly when they are not used. Studies have shown both that women's choice of college majors is related to future career plans and that occupational choices are related to career expectations. It should be noted, also, that the young women of today have high expectations of working careers and this has been reflected in

a dramatic change in schooling patterns. Within just the past decade, women's enrollment in the sciences, in engineering, in medical and law schools and in business courses has escalated sharply.

Other aspects of investment that increase productivity and earnings may also differ between men and women. Women may be less willing to invest considerable resources in job search if they are uncertain about the number of years they will work; and women may be less free to move to other regions if their careers are secondary to their husbands' careers.

Since many women continue to be responsible for a disproportionate share of household maintenance and child care even after they enter employment, they may also evaluate certain job characteristics differently than men and this could have implications for the occupations and industries they work in as well as for their earnings. For example, some women may place a premium on a job with a work day and calendar year corresponding to the time children are in school or on flexible hours in more informal work settings. Jobs requiring considerable overtime, on the other hand, would be avoided. A shorter work day may make a long trip to work a poor investment; women working part time may therefore be willing to give up some pay for a job located closer to home.

The burden of household responsibilities may affect more than desired hours on the job. Married women holding full-time jobs have been shown to spend about 25 hours a week on household work--twice the hours spent by their husbands. Some analysts believe that the energy drain of home responsibilities make it infeasible for many women to take jobs requiring intense commitments of time and effort. One recent study of highly successful women executives found that this group of women were much more likely to be unmarried or childless than the average woman.

#### Empirical Evidence

A growing body of literature has investigated the effect of women's human capital investments and other factors on women's earnings and on the male-female pay gap. These studies use different data sources, refer to different populations and control for many, but not always the same, set of variables. Even the unadjusted wage gap ---that is, the ratio of women's to men's earnings before adjusting for skill and other factors - varies from study to study, depending on the type of population considered. Studies based on heterogeneous samples including women and men of all ages and in all occupations and industries tend to have lower ratios (larger differentials). Studies based on more homogeneous populations tend to start out with higher ratios even before adjustment. Thus, unadjusted differentials among single men and women, among college faculty or among doctorates in particular fields are relatively small.

The proportion of the differential that is attributed to various factors also differs from study to study. Since women have complex and varying work histories, the adequacy of information on work experience is crucial to the findings of the studies. Typically, studies that do not have a direct measure of women's work experience and try to infer it by estimates of potential experience (e.g., by using age) find little effect of work experience on women's earnings or on the wage gap. When data on women's actual years of total work experience, current job tenure and the pattern of work breaks are used, a substantial portion of the gap is explained. In fact, sex differences in work experience and schooling have been found to account for roughly half of the wage gap.

Does the remaining differential reflect discrimination in the labor market? There is simply not enough information to answer the question. The unexplained residual will overestimate discrimination if all the relevant variables have not been accurately identified and measured. Clearly, many variables of possible importance have been omitted from analysis because the data are not available. Among the variables usually omitted are the subjects studied in school, the extent of training outside school, or the extent of job search. Details about actual hours worked in the past are seldom available. Moreover, what may be the most important factor of all--ties to home responsibilities and career



motivation --is difficult to quantify and has as a result been omitted from most studies. Whenever a researcher has been able to introduce into the analysis a rough proxy for any of these additional variables, an additional amount has been explained, however. For example, one recent study finds that difference in college major can account for one-third of the male-female wage gap. Women who had early intentions of a work career have also been found to have higher earnings later on than those who expected to be homemakers but later revised their plans and went to work. Married women who migrated to another geographic region to follow their husbands have been shown to have lower earnings than would otherwise be the case.

On the other hand, some analysts have also pointed out that variables used to measure skill may themselves reflect discrimination. For example, women may work fewer years because they anticipate lower earnings due to discrimination. Statistical efforts to account for this reverse causality have generally not found it to be important. But these suppositions illustrate how controversial the interpretations of the unexplained residual can be.

To the extent the unexplained residual does reflect discrimination it is important to recognize that discrimination in the labor market can take several different forms. Although it is illegal to pay women and men different wages for equal

quality work on the same job, it is still possible that such cases exist, although most analysts do not seem to believe they are widespread. A second and more likely form of discrimination may arise in hiring and promotion. Although it is prohibited by Title VII of the Civil Rights Act women may have had more difficulty getting hired in certain jobs than men or in obtaining promotions.

Studies of the wage gap have seldom been able to include direct measures of discrimination. Court cases have provided evidence of unequal treatment in employment which is sometimes found to be discriminatory and sometimes not. An article in the Public Interest described one case involving the "XYZ company" (so named to protect the identity of the company) which was accused of denying women promotions on an equal basis with men. It was found, however, that women turned down promotions for family reasons, often because a promotion involved moving to a different region. When women themselves are asked if they have experienced sex discrimination, surveys indicate that only a small fraction report that they have. For example, 6 percent of women responding to the National Longitudinal Survey reported having experienced discrimination in the previous five years attributable to their sex. These women may have forgotten or failed to recognize discriminatory behavior; nonetheless these data do suggest that discrimination may not be as pervasive as some believe it to be.

A third type of discrimination --the type addressed by comparable worth policy --refers to the possibility that wages in occupations that are predominantly held by women are lower because employers systematically downgrade them. Moreover, they are lower for both the men as well as the women who hold them. This argument differs from the idea that pay in women's occupations is depressed because of an oversupply to these occupations. An oversupply could arise either because large numbers of women entering the labor force choose these occupations (which is compatible with no discrimination) or because women are barred from entering some occupations causing an oversupply in others (a discriminatory situation). The argument made by supporters of comparable worth, however, is that discrimination goes beyond restrictions on entering certain occupations and includes the ability of employers to pay less to women's jobs regardless of supply considerations, simply reflecting prejudice against such jobs because they are mostly held by women.

The ability of firms to wield such power, however, is highly questionable. If a firm underpaid workers in women's occupations, in the sense that their wages were held below their real contributions to the firm's receipts, other firms would have a strong incentive to hire workers in these occupations away, bidding up the wages in these occupations. Competition is a strong force curtailing employer power and

prejudice. This process could only be thwarted by collusion and conspiracy among employers, an unrealistic prospect considering the hundreds of thousands of firms.

Some researchers have attempted to test the validity of this argument by adding a variable measuring the percent female in the worker's occupation to a standard equation for estimating the effects of different variables on earnings. The reasoning behind this exercise is that, holding other things the same, a finding of lower pay in typically female occupations would be evidence that something is holding down pay in these occupations. There are two problems with this interpretation. One is that there is no way to distinguish whether lower pay, if it is found, results from supply factors or "crowding" (whether due to choice or to discriminatory restrictions) or whether the lower pay results from wage discrimination. Another problem is that "other things" may not be the same. That is, women (or men) who work in predominantly female jobs may differ in ways that are not accounted for by the measured variables. The findings, however, although erratic, have generally been that while pay in typically female occupations is lower, it is not much lower, once work experience and schooling variables are included. The variable appears to explain only a small portion of the gender gap in wages.

Implications of Economic Research for the Proposed Study

In sum, while economic analysis has proven to be valuable in providing insights about the sources of the wage gap, it is inconclusive about the portion that can be attributed to discrimination because of the difficulty of quantifying many variables believed to be important. The variables likely to be omitted include non-discrimintory factors,--i.e., unmeasured differences in attributes that would affect job assignment and pay--as well as discriminatory factors. Discriminatory factors could relate to unequal pay for equal work' to discriminatory hiring and promotion practices' or to discriminatory wage schedules that underpay occupations with a predominance of women and overpay occupations held predominantly by men. The proposed legislation has predetermined that the unexplained residual in an analysis of the wage gap shall be deemed to be a reflection of discriminatory pay setting practices. Yet non-discriminatory factors may account for most of this unexplained portion. Moreover, to the extent the residual is due to discrimination, it may well take the form of discriminatory hiring and promotion practices and not discriminatory rate setting.

JOB EVALUATION

The proposed legislation mandates that a job-content analysis also be conducted and gives equal weight to the results of such an analysis. However, job evaluation has no

place as a method for objectively determining the sources of the pay gap, and it is wholly inappropriate as a tool for determining discrimination.

There are two attributes associated with job evaluation that particularly limit its usefulness as a tool for analyzing sex based wage disparities. One is the inherent subjectivity of the concept of value. The other is the confusion over the proper role of "value" in determination of wages in a modern market economy.

Most job evaluations attempt to rate jobs according to their knowledge and skills, mental demands, accountability and working conditions. These broad categories, however, have no single objective definition. There are numerous possible attributes that could in principle be related to skill; for example, but there is no scientific way to select precisely which attributes they should be; and once enumerated, there is no scientific way to measure the relative importance of the attributes. Is the knowledge of calculus worth more or less than the knowledge of anatomy, or the knowledge of wiring an electrical system, or the skill of typing or the knowledge of speaking French? For the category "working conditions", is there any single bias-free way to determine the relative value of lifting 100 lb. weights, working with a noisy drill, working with noisy children, cleaning a bedpan or working outdoors in Chicago in the winter. And how then should it be determined

whether, and by how much, skill is worth more or less than working conditions? People, of course, may have opinions about these matters and a committee could vote on the worth of the various attributes. But the outcome would reflect the subjective views of the majority of the committee and could not in any way be regarded as objective truth.

The difficulty of interpreting the results of a job evaluation are aptly illustrated by the evaluation conducted in Washington State. In the 1970's the State hired a job-evaluation firm, Norman Willis Associates, to assist a politically selected committee in rating the jobs used as benchmarks in setting pay in State civil service employment. The Committee's task was to assign points on the basis of knowledge and skills, mental demands, accountability, and working conditions. In the 1976 evaluation a registered nurse at level IV was assigned 573 points, the highest number of points of any job - 280 points for knowledge and skills, 122 for mental demands, 160 for accountability, and 11 for working conditions. A computer systems analyst at the IV level received a total of only 426 points - 212 points for knowledge and skills, 92 points for mental demands, 122 points for accountability, and no points for working conditions.

These ratings likely differ radically from the values other committees might assign. They clearly differ radically from the market's evaluation of these jobs. In the market,

systems analysts earn about 50 percent higher pay than registered nurses. Such differences between the Willis assignments and market wages are found throughout the Washington State job evaluation. A clerical supervisor received a higher rating than a chemist, yet the market rewards chemists with 41% higher pay. The evaluation assigned an electrician the same points for knowledge and skills and mental demands as a beginning secretary and five points less for accountability. Truck drivers were ranked at the bottom, receiving fewer points than telephone operators or retail clerks. The market, however, pays truck drivers 30% more than telephone operators and the differential is wider for retail clerks.

The Willis study found large disparities in pay between "male" and "female" jobs and this disparity formed the basis of the well known case, *AFSCME v. State of Washington*. Should the Willis findings be taken as evidence of discrimination and should the state pay according to the Willis scale, or is the Willis scale faulty?

The Willis methodology has been criticized in a recent article by two professors who believe that the results were subject to the biases of the evaluation committee (See the article by David Baumer and Robert Moffie in the North Carolina A Review of Business and Economics, Spring 1985). They noted: "The Willis study not only used a subjective methodology, but



also their use of statistics was primitive and transparently biased." The state called upon another job evaluator, Paul Jeanneret to conduct an independent analysis. The Jeanneret study, however, found no disparity in pay among comparable male and female jobs. In comparing the two evaluations Prof. Arthur Paddilla finds that: "In every instance where the Willis method of job evaluation rated the job lower than Jeanneret's, the job was predominantly male." The Judge, however, refused to admit the results of the Jeanneret evaluation which, in the opinion of some experts, was more soundly based.

The two evaluations mentioned studied the same jobs and came up with different answers. The firms involved were each acknowledged experts. The two studies did utilize different methods. However, widely different results can also be produced from the same method when different job characteristics are assigned different factor weights. the Washington State case illustrates the virtual impossibility of conducting a job evaluation study regarded as an objective standard for assessing pay differences between women and men.

Although Judge Tanner who presided over the Washington State case was willing to accept the Willis study as evidence of discrimination, the case is on appeal. Moreover, in a more recent case in the State of Illinois, Judge Kocoras refused to accept the findings of a job evaluation as evidence of discrimination. Judge Kocoras' decision aptly expresses the point:

...any criteria of pay equity ultimately rests on value judgments. Although some correlation between sex-segregated jobs and lower wages no doubt exists, the job characterization factor is undeniably only one among many of the determinatives of pay scales. Because jobs do not have an intrinsic value that can be scientifically measured, the limitations inherent in job evaluation techniques prohibit the proposed extension of Title VII.

It is on this fundamental point that I depart from Judge Tanner's reasoning in the one case, to date, which has recognized a broad based comparable worth claim. In AFSCME v. State of Washington, 578 F. Supp. 846 (D. Wash. 1983), currently on appeal, Judge Tanner concluded that the State of Washington violated Title VII by compensating women employees in female-dominated job classifications at levels below those paid to employees in male-dominated job classifications that had been rated comparable in State-sponsored job evaluation studies. The State had commissioned studies that placed numerical values on State jobs, but no agreement had been reached, at least until 1983, that the State would adopt a new pay scale on the basis of those numbers. To reach the conclusion in the Washington State case, the court had to assume that the results of the State's job evaluation studies were valid measurements of the relative "worth" of the jobs in question - more valid, in fact, than the value placed on those jobs by the market which, the State alleged, formed the basis for the State's existing pay scales. I, unlike Judge Tanner, am unwilling to treat the results of the State's job evaluation studies as the true and reliable measurement of the inherent worth of the surveyed jobs."

The proposed legislation, H.R. 3008, mandates that a job evaluation be conducted under the auspices of a commission that appears partisan in its makeup. Because of the inherent subjectivity of the job evaluation methodology, the results will not be bias-free, but will instead reflect the opinions of the commission and the consultants chosen to execute the study.

ALTERNATIVE STUDIES

As economic analysis of the earnings of male and female federal employees might provide considerable insight into the factors underlying the differential. It would be important, of course, to obtain detailed information on work histories prior to federal service' on years of federal service, years of schooling, college major, and additional training. It would also be useful to try to incorporate information on job characteristics. Although the bill specifies that the studies should use occupations as the unit of analysis, it would be important to conduct an economic analysis based on individual workers. No matter how detailed the analysis, it is likely that a portion of the wage gap will remain unexplained. This unexplained residual should be taken for what it is--not as evidence of discrimination.

There are two other types of studies that I believe could provide useful insights into the treatment of men and women in federal employment. One study would use survey data to compare the pay that workers with similar characteristics receive in the private sector, in state and local employment and in federal employment, to determine if the federal government is paying on a different basis for men and for women, and if those in female or male dominated occupations are rewarded similarly in federal employmen relative to the market.

Another study would examine why women and men are in different grades and in different occupations in federal employment. Such a study might help in identifying whether the federal government does in fact erect barriers to qualified women with respect to entering male dominated jobs such as the construction crafts, engineering, or the law. Are women with the relevant skills who apply for these jobs steered into clerical work? Are women who desire promotions to higher level management posts denied equal treatment? A carefully designed questionnaire might provide information that would help determine whether the observed employment patterns reflect discrimination by the government or the choices and preparation of male and female employees. Certainly the policy remedies undertaken should be guided by studies such as these if they are to address real problems of unequal opportunity and not simply fulfill the policy agenda of those who seek to legislate equal outcomes for women and men.